

### IN THE CLAIMS

Please cancel Claims 1-13 and 21-27 of the originally filed claims. With entry of the present amendment, the claims of the present application are as follows:

Claims 1-13. (Canceled).

14. (Original) Transmitting apparatus wherein a digitized television IF signal is transformed into a transport channel bit-stream (TCBS) for transmission of the said digitized television IF signal from a first location (FL) to one or more second locations (SL), comprising:

a splitter (SP) for splitting a sample (S1) of the said digitized television IF signal into N most significant bits (MSB) and M-N least significant bits (LSB).

an encoder DPCM-core (D1) for compression of the N most significant bits (MSC) of a sample (S1) into a N-C bit compressed transport sample (CTS), generating a clipped prediction error  $((e_{enc})_c)$ ,

an output for the transport channel bit-stream (TCBS).

a first location clipping detector (BSC1 or BSC12) which generates a first location PCM-bit substitution control signal (SC1) indicating what is to be transmitted as residual transport sample (RTS), either the M-N least significant bits (LSB) of the sample (S1) of the first digitized television IF signal, or a substitution value (CE) being a first function of both the clipping error corresponding to the said sample S1 of the first digitized television IF signal, and the M-N LSB's of the said sample (S1) of the first digitized television IF signal, and

the first location substitutor (BS1) which substitutes the M-N least significant bits (LSB) by a substitution value (CE), depending on the value of the first location PCM-bit substitution control signal (SC1).

15. (Original) Transmitting apparatus according to claim 14, further comprising:

a prediction mapper (PM1) for generating a mapped prediction  $(m(\hat{x}_{enc}))$  from an encoder prediction  $(\hat{x}_{enc})$  from the encoder DPCM-core (D1), and

an adder (ADD12) which adds the mapped prediction  $(m(\hat{x}_{enc}))$  and the clipped prediction error  $((e_{enc})_c)$ , and then wraps around the result of the addition, thus obtaining a compressed transport sample

an adder (ADD12) which adds the mapped value ( $m(\hat{x}_{enc})$ ) and the clipped prediction error  $((e_{enc})_c)$ , and then wraps around the result of the addition, thus obtaining a compressed transport sample (CTS), and wherein the transmitting apparatus includes at least one of (A) and (B):

- (A) the encoder DPCM-core (D1) comprises means to clip the prediction errors to a range equal to or smaller than  $2^{(N-C)}-1$ , and
- (B) the prediction mapper (PM1) comprises means for a uniform or non-uniform mapping.

16. (Original) Transmitting apparatus wherein a digitized television IF signal is transformed into a transport channel bit-stream (TCBS) for transmission of the said digitized television IF signal from a first location (FL) to one or more second locations (SL), comprising:

an encoder DPCM-core (D1) for compression of a sample S1 of the first digitized television IF signal, represented by N bits, into a N-C-bit compressed transport sample (CTS), generating a prediction  $(\hat{x}_{enc})$  and a clipped prediction error  $((e_{enc})_c)$ ,

an output for the transport channel bit-stream (TCBS),

a prediction mapper (PM1) for generating a mapped prediction ( $m(\hat{x}_{enc})$ ) from the prediction  $(\hat{x}_{enc})$  from the encoder DPCM-core (D1), and

an adder (ADD12) which adds the mapped prediction ( $m(\hat{x}_{enc})$ ) and the clipped prediction error  $((e_{enc})_c)$ , and then wraps around the result of the addition, thus obtaining a compressed transport sample (CTS), and wherein the transmitting apparatus includes at least one of (A) and (B):

- (A) the encoder DPCM-core (D1) comprises means to clip the prediction errors to a range equal to or smaller than  $2^{(N-C)}-1$ , and
- (B) the prediction mapper (PM1) comprises means for a uniform or a non-uniform mapping.

17. (Original) Transmitting apparatus according to claim 14, further comprising:

a phase-locked loop (PLL1) which estimates the phase  $(\Phi_{enc})$  of the IF carrier of the digitized television IF signal, based on a locally decoded television IF signal  $(\tilde{x}_{enc})$  from the encoder DPCM-core (D1),

a luminance estimator (LUE1) which estimates the luminance of the video signal contained in the digitized television IF signal, based on the decoded television IF signal  $(\tilde{x}_{enc})$  and on the estimated phase  $(\Phi_{enc})$  of the IF carrier, resulting in an estimated luminance  $(L_{enc})$ , and

a shift estimator (SHE1) which estimates a shift  $(sh_{enc})$ , based on the estimated phase  $(\Phi_{enc})$  of the IF carrier and on the estimated luminance  $(L_{enc})$ ,

wherein the encoder DPCM-core comprises means to clip the prediction error ( $e_{enc}$ ) to a range which is shifted over a shift ( $sh_{enc}$ ).

18. (Original) Transmitting apparatus wherein a digitized television IF signal is transformed into a transport channel bit-stream (TCBS) for transmission of the said digitized television IF signal from a first location (FL) to one or more second locations (SL), comprising:

an encoder DPCM-core (D1) for compression of a sample (S1) of the first digitized television IF signal, represented by N bits, into a N-C-bit compressed transport sample (CTS), generating a prediction ( $\hat{x}_{enc}$ ) and a clipped prediction error ( $(e_{enc})_c$ ),

an output for a transport channel bit-stream (TCBS),

a phase-locked loop (PLL1) which estimates the phase ( $\Phi_{enc}$ ) of the IF carrier of the digitized television IF signal, based on a locally decoded television IF signal ( $\tilde{x}_{enc}$ ) from the encoder DPCM-core (D1),

a luminance estimator (LUE1) which estimates the luminance of the video signal contained in the digitized television IF signal, based on the decoded television IF signal ( $\tilde{x}_{enc}$ ) and on the estimated phase ( $\Phi_{enc}$ ) of the IF carrier, resulting in a estimated luminance ( $L_{enc}$ ), and

a shift estimator (SHE1) which estimates a shift ( $sh_{enc}$ ), based on the estimated phase ( $\Phi_{enc}$ ) of the IF carrier and on the estimated luminance ( $L_{enc}$ ),

wherein the encoder DPCM-core comprises means to clip the prediction error ( $e_{enc}$ ) to a range which is shifted over a shift ( $sh_{enc}$ ).

19. (Original) Transmitting apparatus according to claim 18, further comprising:

a prediction mapper (PM1) for generating a mapped value  $m(y)$  of either the encoder prediction  $y = \hat{x}_{enc}$  from the encoder DPCM-core (D1) or the sum  $y = \hat{x}_{enc} + sh$  of the encoder prediction ( $\hat{x}_{enc}$ ) and the clip range shift  $sh$ , and

an adder (ADD12) which adds the mapped value ( $m(y)$ ) and the clipped prediction error ( $(e_{enc})_c$ ), and then wraps around the result of the addition, thus obtaining a compressed transport sample (CTS), and wherein the transmitting apparatus includes at least one of (A) and (B):

(A) the encoder DPCM-core (D1) comprises means to clip the prediction errors to a range equal to or smaller than  $2^{(N-C)}-1$ , and

(B) the prediction mapper (DM1) comprises means for a uniform or a non-uniform mapping.

20. (Original) Transmitting apparatus according to claim 17, further comprising:

a prediction mapper (PM1) for generating a mapped value  $m(y)$  of either the encoder prediction  $y = \hat{x}_{enc}$  from the encoder DPCM-core (D1) or the sum  $y = \hat{x}_{enc} + sh$  of the encoder prediction  $\hat{x}_{enc}$  and the clip range shift  $sh$ , and

an adder (ADD12) which adds the mapped value ( $m(y)$ ) and the clipped prediction error  $((e_{enc})_c)$ , and then wraps around the result of the addition, thus obtaining a compressed transport sample (CTS), and the transmitting apparatus includes at least one of (A) and (B):

(A) the encoder DPCM-core (D1) comprises means to clip the prediction errors to a range equal to or smaller than  $2^{(N-C)}-1$ , and

(B) the prediction mapper (PM1) comprises means for a uniform or non-uniform mapping.

Claims 21-27. (Canceled).